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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,475	11/05/2003	Young Sang Byun	8733.927.00-US	7742

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EXAMINER

SCHATZ, CHRISTOPHER

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,475

Applicant(s)

BYUN ET AL.

Examiner

Christopher T. Schatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/5/03, 3/14/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 12-23 in the reply filed on April 5, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokoyama et al. (US 2005/0167036).

Yokoyama et al. discloses a method of holding a substrate within a substrate bonding apparatus, comprising: providing a stage 58 having a contact surface and at least one passage intersecting the contact surface; providing a suction force applying means within each passage for transmitting a suction force a predetermined distance from the contact surface; arranging a substrate 3 proximate the stage; generating the suction force; transmitting the generated suction

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force from the suction force applying means to operably proximate portions of the substrate; and holding the substrate substantially parallel to the contact surface (figures 13, 16b, 17(a)-17(c), 18(a)-18(c), 19(a), 19(b); paragraphs 0134, 0135, 0161-0169). Applicant should note that examiner is interpreting the term “operably proximate” to mean close enough such that the device can properly operate. Since paragraph 0165 explicitly discloses that “the air is drawn out through the holes 63, causing the glass substrate to adhere to and be held by the adhesive pad,” examiner asserts that Yokoyama et al. discloses the suction force is transmitted to “operably proximate” portions of the substrate. As to claim 13, Yokoyama et al. discloses a method further comprising providing a plurality of vacuum holes within the stage transmitting the generated suction force from the contact surface (figures 13, 16b, 17(a)-17(c), 18(a)-18(c), 19(a), 19(b)). As to claim 14, Yokoyama et al. discloses a method further comprising transmitting the generated suction force from the plurality of vacuum holes to operably proximate portions of the substrate (paragraph 0165). As to claim 15, Yokoyama et al. discloses a method wherein transmitting the generated suction force from the suction force applying means comprises moving the suction force applying means with respect to the contact surface such that the suction force applying means is operably proximate the at least one portion of the substrate (paragraph 0161, 0165). As to claim 16, Yokoyama et al. discloses a method wherein moving the suction force applying means comprises projecting an end portion of the suction force applying means from within a respective passage to the predetermined distance from the contact surface (paragraph 0161, 0165, figures 17(a)-17(c)). As to claim 17, Yokoyama et al. discloses a method wherein the projecting comprises arranging an end portion of the suction force applying means operably proximate a portion of the substrate (paragraph 0161, 0165, figures 17(a)-17(c)). As to

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claim 18, Yokoyama et al. discloses a method wherein holding the substrate substantially parallel to the contact surface comprises moving the suction force applying means with respect to the contact surface substrate (paragraph 0161, 0165, figures 17(a)-17(c)). As to claim 19, Yokoyama et al. discloses a method wherein the moving comprises arranging an end portion of the suction force applying means within a respective passage such that the end portion is substantially flush with the contact surface. As to claim 20, Yokoyama et al. discloses a method of holding a substrate 3 to a stage 57 within a substrate bonding apparatus, comprising: generating a suction force; transmitting the generated suction force from a contact surface of a stage; and transmitting the generated suction force from a predetermined distance away from the contact surface (figures 13, 16b, 17(a)-17(c), 18(a)-18(c), 19(a), 19(b); paragraphs 0134, 0135, 0161-0169). As to claim 21, Yokoyama et al. discloses a method further comprising applying the generated suction force transmitted from the contact surface to at least one portion of a substrate (paragraph 0161, 0165, figures 17(a)-17(c)).

As to claim 22, Yokoyama et al. discloses a method further comprising applying the generated suction force transmitted from the predetermined distance away from the contact surface to at least one portion of a substrate (paragraph 0161, 0165, figures 17(a)-17(c)). As to claim 23, Yokoyama et al. discloses a method further comprising transmitting the generated suction force applied to the at least one portion of the substrate from the contact surface of the stage (paragraph 0161, 0165, figures 17(a)-17(c)). Applicant should note that examiner interprets “transmitting” to mean to pass or be conveyed through space or a medium. Examiner asserts that the suction force in Yokoyama et al. is “transmitted” either at the contact surface or at a predetermined distance away from the contact surface. Thus the reference anticipates the claims.

4. Claims 12-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Joffe et al. '519 Joffe et al. discloses a method of holding a substrate within a substrate bonding apparatus, comprising: providing a stage having a contact surface 210 and at least one passage intersecting the contact surface (figure 14); providing a suction force applying means within each passage for transmitting a suction force a predetermined distance from the contact surface; arranging a substrate 226 proximate the stage; generating the suction force; transmitting the generated suction force from the suction force applying means to operably proximate portions of the substrate; and holding the substrate substantially parallel to the contact surface (figure 14, column 11, lines 23-55). Applicant is specifically referred to column 11, lines 47-55, where Joffe et al. explicitly discloses a suction cup (which examiner considers to be part of the suction applying means) and states that "The operating suction of the four suction cups 264 is drawn through the hollow center of loader posts 254." Examiner asserts that this disclosure is equivalent to "transmitting the generated suction force from the suction force applying means to operably proximate portions of the substrate." Joffe et al. anticipates the claims.

As to claim 13, Joffe et al. discloses a method further comprising providing a plurality of vacuum holes within the stage transmitting the generated suction force from the contact surface (figure 14, column 11, lines 23-55). As to claim 14, Joffe et al. discloses a method further comprising transmitting the generated suction force from the plurality of vacuum holes to operably proximate portions of the substrate (column 11, lines 47-55). As to claim 15, Joffe et al. discloses a method wherein transmitting the generated suction force from the suction force applying means comprises moving the suction force applying means with respect to the contact surface such that the suction force applying means is operably proximate the at least one portion

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of the substrate (figure 14, column 11, lines 23-55). Note that the reference explicitly recites

“Loader posts 254 are capable of being raised above the upper surface of vacuum chuck 162...”

As to claim 16, Joffe et al. discloses a method wherein moving the suction force applying means comprises projecting an end portion of the suction force applying means from within a respective passage to the predetermined distance from the contact surface (figure 14, column 11, lines 23-55). As to claim 17, Joffe et al. discloses a method wherein the projecting comprises arranging an end portion of the suction force applying means operably proximate a portion of the substrate (figure 14, column 11, lines 23-55). As to claim 18, Joffe et al. discloses a method wherein holding the substrate substantially parallel to the contact surface comprises moving the suction force applying means with respect to the contact surface substrate (figure 14, column 11, lines 23-55). As to claim 19, Joffe et al. discloses a method wherein the moving comprises arranging an end portion of the suction force applying means within a respective passage such that the end portion is substantially flush with the contact surface (figure 14, column 11, lines 23-55). As to claim 20, Joffe et al. discloses a method of holding a substrate 226 to a stage within a substrate bonding apparatus, comprising: generating a suction force; transmitting the generated suction force from a contact surface of a stage; and transmitting the generated suction force from a predetermined distance away from the contact surface (figure 14, column 11, lines 23-55). As to claim 21, Joffe et al. discloses a method further comprising applying the generated suction force transmitted from the contact surface to at least one portion of a substrate (figure 14, column 11, lines 23-55). As to claim 22, Joffe et al. discloses a method further comprising applying the generated suction force transmitted from the predetermined distance away from the contact surface to at least one portion of a substrate (figure 14, column 11, lines 23-55). As to claim 23,

Joffe et al. discloses a method further comprising transmitting the generated suction force applied to the at least one portion of the substrate from the contact surface of the stage (figure 14, column 11, lines 23-55). Applicant should note that examiner interprets "transmitting" to mean to pass or be conveyed through space or a medium. Examiner asserts that the suction force in Joffe et al. is "transmitted" either at the contact surface or at a predetermined distance away from the contact surface. Thus the reference anticipates the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Christopher T. Schatz** whose telephone number is **571-272-1456**. The examiner can normally be reached on 8:00-5:30, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christopher T. Schatz


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